

**Salmon River Restoration Council
Final Report
Project Number 97-JITW-01
Agreement Number 14-48-11333-97-J159**

Abstract:

This project has enlisted private property owners from the community to steward their lands over time in a fashion that is consistent with ecosystem management over the larger landscape. The Salmon River Restoration Council (Council) has provided a crew of displaced timber workers from the community to construct fuel break systems, restore damaged riparian and wetlands habitat, reduce road caused erosion problems, and perform project inventory and monitoring tasks on several parcels of private property in the Salmon River subbasin. Restoration activities have taken place on approximately 40 acres. Detailed acreage is in the GIS Report.

Tasks in this project have been performed in consultation with the USF&WS, the USFS, and the Karuk Tribe of California. This collaborative approach should be a major component of a comprehensive fuels reduction program on the Salmon River. This project has expanded community and agency support for the Council and help in the recovery and protection of the Salmon River subbasin.

Methods Used:**Fuels Treatment**

Fuels treatment techniques included handpiling and removal of excessive fuels from site. To create a system of shaded fuel breaks on private property, we utilized existing roads, skid trails and ridges. Fuel reduction also took place in buffer zones next to the riparian areas to protect the riparian areas from fire.

Native Vegetation Release

During the fuels treatment activities, individual plants of desired species that are currently suppressed were released.

Noxious Weed Removal

Remove, when possible, noxious weeds from restoration sites. Species targeted for removal were: star thistle, Scotch broom, Klamath weed, Marlahan mustard, Himalayan blackberries, and bull thistle.

Nursery

The species of native vegetation that currently occupy or are adjacent to the restoration site were identified. Acceptable native species guidelines for seed and cutting collection and propagation were adhered to. Various plant propagation, site-prep and planting techniques were utilized. These techniques are commonly used in standard reforestation practices.

Irrigation

Some of the planted seeds, cuttings, and seedlings were in very harsh sites. In order to increase their chance of success, they were watered in the field. The water systems consisted of standard low flow irrigation equipment. This system is designed to be easily removed when watering is no longer needed after the plants are adequately established.

Planting

Hand planting methods, using hoe-dads, shovels, or dibbles were employed. Each seedling or cutting was planted at the best available site or Micro-site. Micro-site selection incorporated the soil, aspect, shade, and other growing characteristics that best suit the specific species to be planted. Each site utilized a variety of species for revegetation to mimic riparian conditions in or around the target site. In addition to planting, mulching, shading and deer proofing occurred when needed and appropriate.

Roads

Surface erosion on cut and fill slopes associated with approximately 2 miles of private roads was reduced through planting and establishing native vegetative species where needed. In addition, water drainage problems on these roads was corrected by maintaining or installing water bars and cleaning of culverts and ditches.

Monitoring

Photo-documentation took place at all restoration sites before, during, and after project activities. A planting survival survey was performed in the final stages of this project (see Appendix 1).

Summary of Monitoring Component

Implementation monitoring activities were conducted by SRRC staff during project activities. Landowners will perform annual monitoring of project sites for at least 5 years following completion of project. Photo-point documentation were taken before during and after from the same point and perspective to assess the project.

Community Outreach/Education Plan

Geographic Information System (GIS) maps and photo displays of JITW project sites will be highlighted in a display at our Salmon River Restoration Council Watershed Center. The center functions as a clearing house for watershed restoration information for the community and the general public. Up-to-date information is available on fish populations, habitat conditions, and other aspects of watershed health.

PROGRAM OBJECTIVES

- A. Modify excessive fuel loading, with a focus on reducing the risk of catastrophic fire at several prioritized parcels of private lands situated in neighborhoods and located in more isolated areas.
- B. Collect and propagation of seeds and cuttings from native vegetation. Teach and learn new methods for local native species identification and propagation.
- C. Identify and release desirable native vegetation in riparian areas and associated buffer zones and in areas associated with fuel breaks where targeted native vegetation is currently being suppressed.
- D. Stabilize failing cut banks and fill slopes associated with roads through revegetation opportunities needed to help correct drainage problems.

- E. Reduce road surface related sediment to the stream through the maintenance of existing and installation of new minimal drainage structures.
- F. Continue to identify useful and efficient techniques that SRRC and landowners and managers can use regarding plant propagation, fuels management, revegetation, erosion control, inventory, monitoring and other restoration activities in the Salmon River subbasin.
- G. Create new job opportunities for displaced workers who have worked in logging related activities or live in timber dependant communities.
- H. Enlist landowners to increase responsible stewarding of their private lands in a manner that is consistent with federal management direction at a landscape level. This participation will foster others in the community to partake in land managing and use activities that are more appropriate.
- I. Fireproof concentrations of rural residencies to a condition that requires low maintenance in the future. This approach will reduce the spread of house fires into wildlands and reduce demands for residential protection during catastrophic fires.

Specifically, shaded fuel breaks were designed by thinning out flammable species, removing dead and down fuels and trimming up remaining trees and shrubs. This technique reduces and breaks up fuel continuity and fuel ladder, while maintaining the vegetative cover needed to prevent unwanted growth of flammable brush species. The resulting fuel break is a long lasting solution to vegetation management in this fire-prone area.

RESULTS

Landowner Participation:

Site #1	Peter Brucker	Godfrey Ranch
Site #2	Brucker/Jacques	Blue Ridge Ranch
Site #3	Johnny Reynolds	Glasgow Bar
Site #4	Adams	Above Cecilville
Site #5	Riewerts	Taylor Creek
Site #6	Gooley	Taylor Creek
Site #7	Petter	Cecilville
Site #8	Martin	Cecilville
Site #9	Snipes/Doyle	Cecilville
Site #10	O'Conner	Finley Camp
Site #11	Colvig	Finley Camp
Site #12	Watts	Rainbow Mine
Site #13	Wilsey	Cecilville

Project Type by Area:

Fuels Reduction Activities were Completed at All Sites Except Site #1 (Godfrey Ranch)

Tree Planting and Irrigation Activities were Completed Only at Site #1 (Godfrey Ranch)

Erosion Prevention Activities were Completed at Sites 1, 2, 6, 8, 9 and 12.

Monitoring Activities were Completed and will Continue at All Sites.

Land Management Plan

Site#1 – Godfrey Ranch

- Fuels Reduction activities occurred on approximately 40 acres (see GIS). We utilized existing roads, skid trails and ridges on private property.
- Approximately 2500 seedlings were planted in selected areas. Plants were collected and grown as part of our local cooperative nursery program. Cuttings and seeds were collected from bigleaf maple, willows, cottonwood, mock orange, yew, grey (digger) pine, willow, Red Bud, Dogwood, Mock Orange, Buck Lotus, hair grass, California Fescue and other native species. Although we had limited success as shown by the independent survey done, the landowners have an ongoing replant program. This project has helped to stimulate the Godfrey Ranch landowners to Draft a Land Management Plan and seek funding for more restoration under the CFIP program.
- Reduction of sediment from roads (approximately 2 miles) was accomplished by constructing and repairing waterbars and other drainage structures, cleaning out plugged or partially blocked culverts, planting grass of cut slopes and using slash to stabilize bare slopes.
- Pictures were taken at many of the sites as a monitoring tool (see Appendix 2).
- Workers spent approximately 225 worker days performing the aforementioned Tasks.
- This project is part of a continuing fuels reduction program – we have gained a wide acceptance and have helped to stimulate the beginning of an interagency Fire Management Strategy.

IN-KIND CONTRIBUTION

In-Kind contributions consisted of several categories:

1. Crew members travel time. The Crew rode in a "Crummy" to and from the job site on their own time. Figure 2 hrs per day average = 450 hours at \$11 per hour = \$4950.
2. Salmon River Restoration Council used GPS and GIS equipment to map project. We figured 40 hours was spent mapping locations. Using \$10 per hour for GPS use, the value of GPS comes to \$400. GIS equipment was used for making ArcInfo coverage and ArcView Project. We figured combined GIS time to be 50 hours at \$60 per hour = \$3000. Some staff time was also donated – we estimate 150 Hrs at \$12 per hour = \$1800.
3. Nursery Plants were tended partly as Volunteer labor. We estimate 200 hours at \$12 hour = \$2400
4. Landowner participation to date is estimated to be approximately 800 hours at \$10 hour = \$8000.

This totals \$20,550.00 in In-Kind Contributions to date. Landowners will continue to maintain the project on their properties. We expect the final In-Kind contribution will greatly surpass the original \$20,520 estimate.

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Summary Report & Recommendations Godfrey Ranch Shaded Fuel Break (JITW 1997)

Background

Contracted with Salmon River Restoration Council to inspect and repair irrigation lines and replace dead planting stock (conifer trees) in Godfrey Ranch shaded fuel break project (JITW 1997). Walked through project area with land owner Peter Brucker, who pointed out layout of irrigation lines and explained project requirements.

Report

- (1) Inspected existing irrigation lines, connections, emitters, etc. Repaired 4 breaks in lines by cutting out bad sections and repairing lines with connectors. Replaced approximately 50-60% of existing emitters which were clogged or broken. Installed home-made filter at top of line # 1. Installed shut-off valve at top of line # 1 B and below junction of line #2 and house water line. Moved lines which were suspended above brush down to ground and partially buried them so as to prevent damage by open range livestock and deer.
- (2) Inventoried planted stock, as possible, located at emitters and in other locations near water lines. Found 19 live trees and 41 dead trees on line #1 A, 14 live trees and 50 dead trees on line #1 B, two live trees and 16 dead trees on line #2A, and 7 live trees and 34 dead trees on line #2B, a total of 40 live trees and 141 dead trees, for a survival rate of approximately 28%. Inspected dead trees to find reason for mortality, found that livestock had browsed some and some had rotted.
- (3) Secured planting stock (approximately 1200 plants) to replace dead trees and replanted all locations where dead trees had been found. Also planted extra trees in locations that were found to be favorable.

Recommendations

- (1) Bury water lines as possible to prevent damage by livestock and deer.
- (2) Construct barriers around trees to prevent damage by livestock and deer. Vexar tubing is one possible barrier. However, vexar tends to cramp branches. A better method would be to surround trees with brush, which will provide some shade, as well as preventing close approach by livestock.
- (3) Erect shade cards where necessary.
- (4) Walk entire irrigation line at least once weekly to check for breaks, damaged stock, etc. Also check filter at top of line #1. Remove, clean and replace if necessary.

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- (5) After trees are established, water will no longer be needed.
- (6) Before watering (in the afternoon or at the end of the day) open end of irrigation lines and allow hot water (which will have been heated by the action of the sun on black waterlines) to run out. When water runs cold, close lines and water planted stock
- (7) Emitters that were clogged but not broken may, in some cases, be cleaned by submersion in a weak acid solution.

Signed:

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by/ldh

cc: SRRC

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**Salmon River Restoration Council
JITW 97 Final Report Appendix 2**

